श्री एस॰ एस॰ अहलुवालिया: सर, किसानों को चारों तरफ से मारा जा रहा है। ...(व्यवधान)...

श्री उपसभापति: विषय गंभीर होगा, मगर बाद में रेज कीजिए। ...(व्यवधान)...

श्रीमती सुषमा स्वराज: जब कावेरी का मसला उठा था। ...(व्यवधान)...

श्री उपसभापति: क्वेश्चन ऑवर के बाद रेज कीजिए। ...(व्यवधान)... क्वेश्चन ऑवर के बाद रेज कीजिए। ...(व्यवधान)... Question No. 541, Shri Rajkumar Dhoot, not present ...*(Interruptions)*... Question No. 542, Shri Ekanath Thakur. ...*(Interruptions)*... क्वेश्चन ऑवर के बाद रेज कीजिए। ...(व्यवधान)... क्वेश्चन ऑवर के बाद रेज कीजिए। ...(व्यवधान)...

SHRI RAVULA CHANDRA SEKAR REDDY: Sir, farmers are committing suicide. ...*(Interruptions)*...

श्री उपसभापति: आप यह रेज कीजिए, लेकिन क्वेश्चन ऑवर के बाद कीजिए। ...(व्यवधान)... देखिए, क्वेश्चन ऑवर मैम्बर्स का राइट है, क्वेश्चन ऑवर सस्पेंड नहीं हो सकता है। ...(व्यवधान)... No, no क्वेश्चन ऑवर सस्पेंड नहीं हो सकता। ...(व्यवधान)... क्वेश्चन ऑवर के बाद रेज कीजिए। ...(व्यवधान)... Nothing will go on record. ...*(Interruptions)*... The House is adjourned till 12 o'clock.

The House then adjourned at thirty-two minutes past eleven of the clock

The House reassembled at twelve of the clock,

MR. DEPUTY CHAIRMAN in the Chair.

WRITTEN ANSWERS TO STARRED QUESTIONS

Effect of Earthquake

*541. SHRI RAJKUMAR DHOOT: Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether it is a fact that Northern India was rocked be earthquake recently;

(b) if so, the details thereof;

(c) whether Government have identified earthquake prone areas in the country;

(d) if so, the details thereof;

(e) whether the local administration of these areas has been advised about the type of construction to be carried out in these areas to withstand the effect of earthquakes; and

(f) if so, the details thereof and if not, the reasons therefor?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) Yes, Sir.

(b) The following two significant earthquakes have been experienced in the northern parts of India in the recent past:

(1) An earthquake of magnitude 7.6 occurred on 8th October, 2005 at 09 Hours 21 Minutes IST with its epicenter at latitude 34.5 degree North and longitude 73.2 degree East in Pakistan. The earthquake had caused extensive damage to property and loss of life in Jammu and Kashmir. The earthquake was also widely felt in other northern parts of the country including Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Uttaranchal, Rajasthan and Delhi. The main shock was followed by several aftershocks of lower intensities with decreasing frequency.

(2) An earthquake of magnitude 5.9 with its epicenter at latitude 36.9 degree North and 70.6 degree East longitude in Hindukush-Afghanistan region occurred at 09 Hours 05 Minutes IST on 3rd April, 2007. The earthquake was reported widely felt in northern parts of India including Delhi.

(c) Yes, Sir.

(d) Bureau of Indian Standards [IS-1893 (Part-I): 2002], based on various scientific inputs from a number of agencies, has grouped the country into four seismic zones *viz.* Zone-II, III, IV and V as shown in Statement-I (*See* below). Of these, Zone V is the most seismically active region, while zone II is the least. The Modified Mercalli (MM) intensity, which measures the impact of the earthquakes on the surface of the earth Statement-II (*See* below), broadly associated with various zones is as follows:

Seismic Zone	**Intensity on MM scale**
II (Low intensity zone)	VI (or less)
III (Moderate intensity zone)	VII
IV (Severe intensity zone)	VIII
V (Very severe intensity zone)	IX (and above)

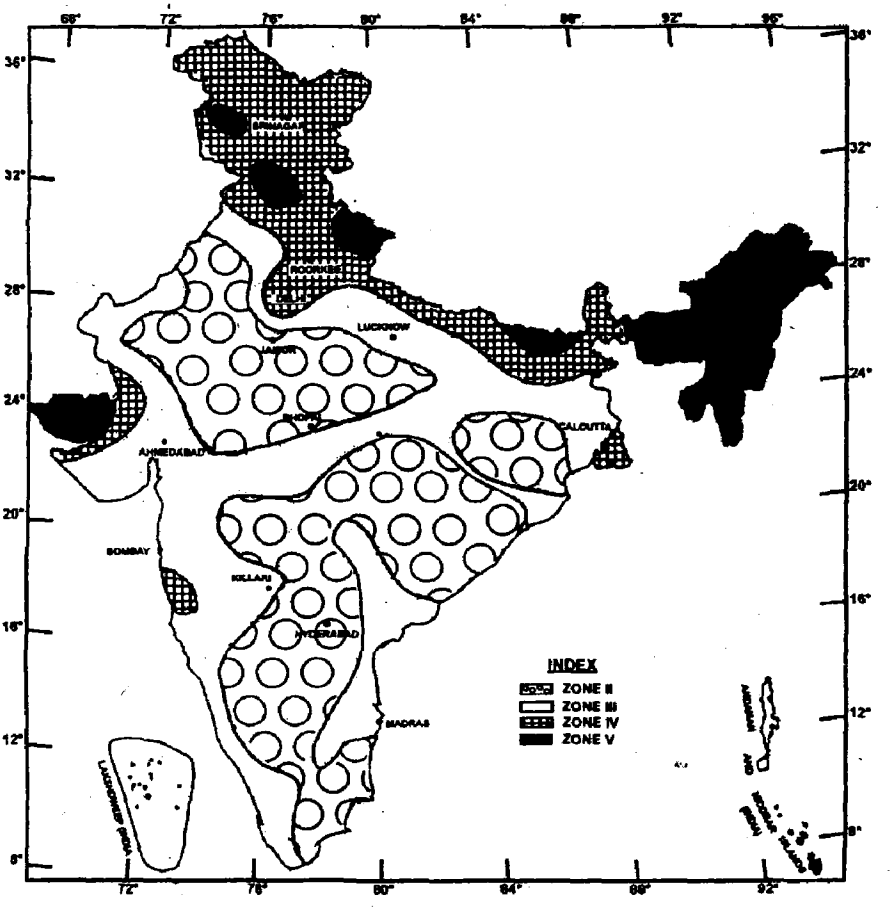
Broadlly, Zone-V comprises of the entire northeastern India, parts of Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Rann of Kutch in Gujarat, parts of North Bihar and Andaman & Nicobar islands. Zone-IV covers remaining parts of Jammu & Kashmir and Himachal Pradesh, Union Territory of Delhi, Sikkim, northern parts of Uttar Pradesh, Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and Rajasthan. Zone-III comprises of Kerala, Goa, Lakshadweep islands, remaining parts of Uttar Pradesh, Gujarat and West Bengal, parts of Punjab, Rajasthan, Madhya Pradesh, Bihar Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamil Nadu and Karnataka. Zone-II covers remaining parts of the country.

(e) and (f) The Bureau of Indian Standards (BIS) has brought out several publications useful for construction practices in the country, which are required to be adopted for construction in earthquake prone areas. In addition, National Building Code of India (2005), has also been brought out by BIS, which incorporates latest provision of relevant codes related to design and construction of earthquake resistant buildings. The above-referred standards cover different types of construction and cater to the requirements of various parts of the country. Ministry of Housing and Urban Poverty Alleviation has been advising State Governments for adopting disaster resistant construction technologies in the housing projects.

To ensure construction of earthquake resistant houses by strengthening techno-legal regime of respective States and UTs, a Model Town and Country Planning Legislation, Zoning Regulation Development Control and Building Regulation/Bye-laws for Safety against Natural Hazards have been prepared by an Expert Committee constituted by the Ministry of Home Affairs. To help State Governments in amending their Acts/Bye-laws/Regulation, Building Materials and Technology Promotion council (BMTPC) has been organizing one-day Technical Workshops on Model Amendments in Town and Country Planning Act, zoning Regulation, Development and Control Regulation and Building Regulation for safety against natural hazards in States/UTs to disseminate the recommendations of the Committee. Technical Workshops have been organized in all 8 North-eastern States. In addition, Technical Workshops have also been organized in Tamil Nadu, Chhattisgarh, Bihar, Uttar Pradesh, Himachal Pradesh, Pondicherry and Andaman and Nicobar.

Statement - I

Seismic Zoning Map of India



Zone	Area(%)
V	12
IV	18
III	27
II	43

Statement II

Modified Mercalli Intensity Scale (Abridged)

Intensity Grade	Description of earthquake effects
1	2
I	Not felt except by a very few under specially favourable circumstances.
II	Felt only by a few persons at rest, specially on upper floors of buildings and delicately suspended objects may swing.
III	Felt quite noticeable indoors, specially on upper floors of buildings but many people do not recognize it as an earthquake; standing motor cars may rock slightly: and vibration may be felt like the passing of a truck;
IV	During the day felt indoors by many, outdoors by a few, at night some awakened; dishes, windows, doors disturbed; walls make creaking sound, sensation like heavy truck striking the buildings; and standing motor cars rocked noticeably.
V	Felt by nearly everyone; many awakened; some dishes, windows, etc. broken; a few instances of cracked plaster; unstable objects overturned; disturbance of trees, poles and other tall objects noticed sometimes; and pendulum clocks may stop.
VI	Felt by all, many frightened and run outdoors; some heavy furniture moves; a few instances of fallen plaster or damaged chimneys; and damage slight.
VII	Everybody runs outdoors, damage negligible in buildings of good design and construction; slight to moderate in well built, ordinary structures; considerable in poorly built or badly designed structures; and some chimneys broken, noticed by persons driving motor cars.
VIII	Damage slight in specially designed structures; considerable in ordinary but substantial buildings with partial collapse;

1	2
	very heavy in poorly built structures; panels walls thrown out of framed structures; falling of chimney, factory stacks, columns, monuments, and walls; heavy furniture overturned, sand and mud ejected in small amounts; changes in well water; and disturbs persons driving motor cars.
IX	damage considerable in specially designed structures; well designed framed structures thrown out of plumb; very heavy in substantial buildings with partial collapse; buildings shifted off foundations; ground cracked conspicuously; and underground pipes broken.
X	Some well built wooden structures destroyed; most masonry and framed structures with foundations destroyed; ground badly cracked; rails bent; landslides considerable from river banks and steep slopes; shifted sand and mud; and water splashed over banks.
XI	Few, if any, masonry structures remain standing; bridges destroyed; broad fissures in ground, underground pipelines completely out of service; earth slumps and landslips in soft ground; and rails bent greatly.
XII	Total damage; waves seen on ground surfaces; lines of sight and levels distorted; and objects thrown upward into the air.

Private participation in Power Sector

*542. SHRI EKANATH K. THAKUR: Will the Minister of POWER be pleased to state:

(a) whether it is a fact that despite repeated attempts by Government to enthuse the private sector, it accounts for just 11 per cent of the country's total power generation capacity of 1,28,182 MW;

(b) whether it is a fact that as the sale of electricity is not governed by the laws of the market, and the distribution sector is still reeling under losses, the private players are reluctant to invest money; and

(c) if so, the steps Government propose to take to promote the private participation in power sector?